Centralna banka
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БОСНЕ И ХЕРЦЕГОВИНЕ

Financial Stability Risk Assessment - the first half of 2024 -

- Issue 3: November 2024

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Abbreviations

BABiH	Banks Association of Bosnia and Herzegovina
BARS	Banking Agency of Republika Srpska
BH	Bosnia and Herzegovina
CBBH	Central Bank of Bosnia and Herzegovina
ECB	European Central Bank
ESG	Environmental, social, and governance
EU	European Union
EURIBOR	Euro Interbank Offered Rate
FBA	Federal Banking Agency
FBH	Federation of Bosnia and Herzegovina
GDP	Gross domestic product
IFC	International Finance Corporation
KM	convertible mark
LCR	Liquidity Coverage Ratio
NPL	Non/performing loans
RS	Republika Srpska

SUMMARY

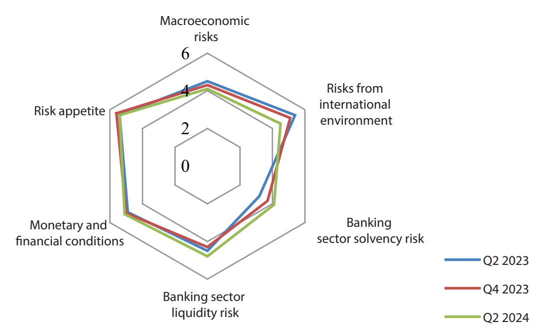
- Macroeconomic conditions in BH in the first half of 2024 are characterised by moderate economic growth, which is still determined by weak economic activity in the euro area countries, which are key trading partners of BH. The overall level of systemic risks to financial stability in Bosnia and Herzegovina, according to the assessments from the risk map, slightly decreased in the first half of 2024, and remained in the range between a low to slightly moderate level, as in the previous year. Moderate economic activity in the first half of the year, along with weakened inflation, and stability at the level of the balance of payments and fiscal sustainability, together contributed to the reduction of risks arising from the internal macroeconomic environment. Although the risks from the international environment have also decreased in the first half of 2024, they are still more evident than the risks arising from the domestic environment, and with the strengthening of geopolitical turmoil and uncertainty at the global level, it is certain that these risks will be more dominant in the coming period as well. According to the official projections of the CBBH, BH economy expects a moderate level of economic growth in the coming period as well (below the multi-year average of 3.0%), so it can be expected that the risk assessment for financial stability will remain at approximately same level as in 2024.
- In the first half of 2024, the banking sector of BH maintained a high degree of stability, primarily under the influence of strong growth in profitability, with the continuing trend of asset quality improvement, high liquidity and good capitalisation, as indicated by the ratings from the financial health indicator diagram. A more pronounced growth in credit activity led to a reduction in the negative gap between the ratio of loans to the private sector and GDP, however, this indicator of the financial cycle still indicates that credit activity is in the negative phase of the cycle. On the other hand, the composite indicator of the financial cycle in the second quarter of 2024 records a positive value after eleven quarters of negative values, and amounts to 0.1 standard deviation, which signals the transition to the upward phase of the financial cycle. In the first half of the current year, the banking sector of BH was not faced with a significant pressure of rising costs of predominantly domestic sources of financing, as a result of which the growth of active and passive interest rates remained limited. The downward trend of non-performing loans continued, with the annual default rate in the second quarter of 2024 being kept at a low level in both the corporate and household sectors. Uncertain economic developments continue to remain significant sources of risk to financial stability, which can be reflected in the difficult ability to service the debt of companies and individuals. In the coming period, the profitability of banks could be dampened under the influence of a number of factors such as rising financing costs, the weakening of the conditions under which banks invest in international financial markets, as well as the potential deterioration of asset quality associated with the weak recovery of economic activity.
- Good capital positions and high liquidity, and their further strengthening, increase the ability of banks to absorb risks, which is confirmed by the results of solvency and liquidity stress tests, which indicate that the banking sector is able to amortise very strong macroeconomic and liquidity shocks assumed in alternative scenarios.
- As key activities related to strengthening the regulatory framework for bank operations in BH in the current year, the following stand out: determination of additional capital requirements and measures to limit systemic risk, and determination of minimum requirements for interest rate risk management in the banking book (IRRBB). In addition to the foregoing, the banking agencies also adopted appropriate temporary measures in 2024 with the aim of preserving the stability of the banking sector. Also, the CBBH introduced a single fee for performing payment transactions in the Giro Clearing system and real-time gross settlement (RTGS). The purpose of this decision is to provide conditions for improving the efficiency of banks in executing payment transactions of households and companies.

1. MACROECONOMIC TRENDS AND FINANCIAL STABILITY RISKS

The most significant source of risk to financial stability at the global level stems from growing geopolitical instability, with particular emphasis on the risk of escalation of war conflicts in Ukraine and the Middle East, and their effect on world trade and raw material prices. Economic activity in the euro area recorded only slight growth during the first half of 2024, which was reflected in the BH economy, that is, in those segments that are directly dependent on the economic performance of the euro area. Nevertheless, the overall growth of BH economy managed to remain positive despite all the challenges, which is one of the key factors that contributed to the fact that the general assessment of risk to financial stability did not record a deterioration compared to the previous year.

In the first half of 2024, the BH economy recorded a real growth of 2.4% compared to the same period of the previous year, which, despite the moderate level of growth, is a significant result if viewed in the light of economic trends in most countries that are key trade partners of BH economy, thus considerably determining the economic trends in BH. In the same period, the German economy recorded stagnation, the economy of Austria decreased by 1.0%, and the economic activity in Italy and Slovenia increased by only 0.9% and 1.3% respectively. On the expenditure side of GDP, growth was supported by all categories except net exports, due to the decrease in demand for BH products from abroad. When it comes to the trends of GDP by the main activities (production approach), the growth was to the greatest extent supported by positive trends within the service sector (the category that includes wholesale and retail trade, transport and the provision of accommodation contributed to half of the achieved GDP growth in the first half of this year). Industrial production is the only category that made a negative contribution to GDP growth, which is a consequence of the decline in the export-oriented manufacturing industry.

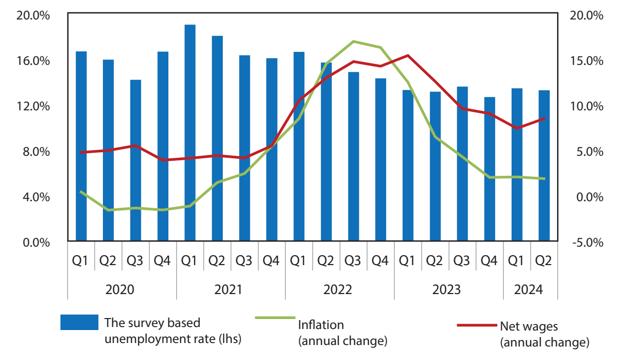
Graph 1: Macrofinancial Risks Chart



Source: CBBH
Note: Increase in distance from the graph center means higher risks and also represents improvement in monetary and financial conditions and higher risk appetite

The moderate economic dynamics during the first six months of 2024 could not have supported the labour market more strongly. The labour force survey even showed an increase in the unemployment rate from 12.7% in the fourth quarter of 2023 to 13.3% in the second quarter of 2024. The reduction in inflationary pressure, partly due to the loss of the base effect and partly due to, the stabilisation of prices on the global energy market has, on the other hand, considerably contributed to the reduction of macroeconomic risks. Thus, in the first six months of 2024, consumer price growth amounted to 2.0% compared to the same period of the previous year, with a tendency to further decrease in the second half of the year. In addition to slowing inflation, the first half of the year was marked by the continued growth of nominal wages, albeit at a slightly lower rate compared to the first half of 2023 (Graph 2). Nevertheless, the difference between inflation and the nominal growth of net wages (real wages) increased further compared to the previous year, which, along with credit growth (general-purpose loans), a stronger inflow of remittances and the growth of tourism, resulted in increased private consumption in the first half of 2024.

Graph 2: Inflation and Labour Market Indicators



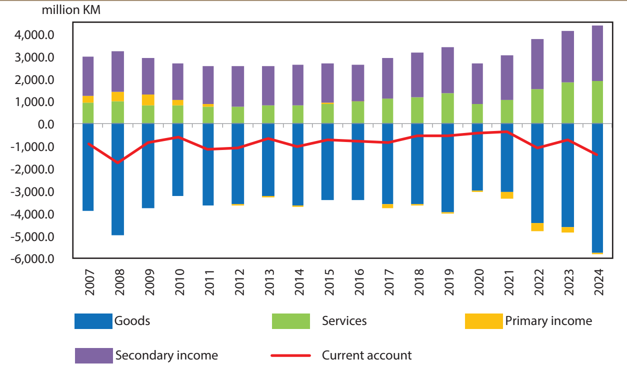
Source: BHAS

The risks arising from economic relations with foreign countries have only slightly increased in 2024, which is a consequence of the increased deficit on the current account. Surplus categories of the current account (services and secondary income) recorded record values, so the strong growth of the goods deficit was mitigated to some extent. The surplus at the expense of services grew dominantly owing to categories related to tourist services (travel and transportation). The tourism sector continuously records positive trends, and the growth in the number of arrivals and overnight stays of foreign guests of 9% and 10% respectively in the first half of 2024 foreshadows a record tourist season in BH.

The achieved surplus at the consolidated level of BH, and the minimal growth of the public (Maastricht) debt of only 0.3% (to KM 13.2 billion) compared to the end of 2023, caused the risks related to fiscal stability to record a significant decrease in 2024.

Consequently, moderate economic activity in the first half of the year, along with weakened inflation and stability at the level of the balance of payments and fiscal sustainability, together contributed to the reduction of risks arising from the internal macroeconomic environment. A similar trend is expected in the second half of the year, and the available high-frequency macroeconomic indicators (inflation, retail trade, tourism, net wages) for the third quarter of 2024 already shape such a macroeconomic scenario.

Graph 3: Semiannual Structure of BH Current Account

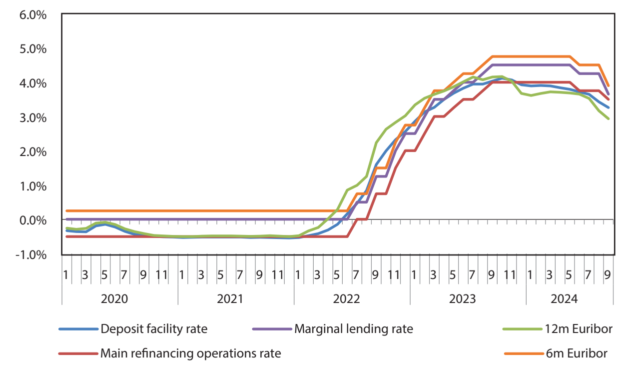


Source: CBBH

Risks from the international environment continued their decreasing trend in the first half of 2024, although they are still more pronounced than those arising from the domestic environment. The decrease in the rating of these risks was mostly influenced by the growth of foreign exchange reserves, which at the end of the second quarter of 2024 reached a historical maximum of KM 16.5 billion, and which forms a "buffer" for absorbing external shocks. At the same time, the decline in foreign trade, although it has a negative impact on GDP growth, in this case mitigates risks from abroad because it reduces the volume of BH's trade ties with foreign countries (measured through the ratio of foreign trade to GDP).Trends from global markets that we take into account when assessing risks from the international environment did not record significant turbulence in the first half of 2024. This primarily refers to the Euribor value and oil prices, the two indicators that have the greatest influence on BH economy. Namely, the six-month Euribor recorded a downward trend in the first half of the year due to the announced change in monetary policy by the ECB, related to the reduction of key interest rates. At the end of the second quarter of 2024, the ECB reduced the key interest rate, thus ending the trend of raising interest rates that began in July 2022 (Graph 4). At the same time, the movement of oil prices on the world market can be considered quite stable, taking into account the intensity of geopolitical tensions at the global level.

All the above factors contributed to the reduction of risks from the international environment in the first half of the year, although global uncertainty is still considered the biggest threat to financial stability.

Graph 4: Trends of the ECB Benchmark Interest Rates and Euribor



Source: ECB

The assessment of overall monetary and financial conditions has slightly improved in the first half of 2024, which indicates that borrowing conditions are somewhat more favourable compared to the end of the previous year, despite the continuation of a slight increase in interest rates on the domestic market. The Bank Lending Survey showed that in the first two quarters of 2024, credit standards for loans to companies remained tight, while standards for granting loans to households were eased. Nevertheless, regardless of the stated difference in standards, both categories of loans recorded intense growth. Strong loan growth supported by economic growth and favourable financing conditions resulted in an increased share of loans in relation to GDP in the first half of 2024, which finally ended the trend of deepening the gap that measures the ratio of loans to GDP, which has been going on since the end of 2020 (see Chapter 2 - Trends and Risks from the Banking Sector). Although the slight growth of interest rates in the household and corporate sector continued in the third quarter of 2024, the expected increase in demand for loans by businesses and households with unchanged credit standards will have a positive impact on the assessment of financial conditions in the second half of 2024. The weakening of risks coming from the international and domestic macroeconomic environment was accompanied by an improved or lower risk perception by investors in the first half of the year. Favourable trends recorded in the field of direct foreign investments, portfolio and other investments in the course of 2024 significantly contributed to the improvement of the rating in this category. Also, both BH stock exchanges recorded an increase in regular turnover as well as stock market indices compared to the first half of 2023. On the other hand, although the growth of real estate prices continued in the first half of 2024, the growth dynamics slowed down significantly compared to the previous two years, which to some extent limited the risks associated with this market, while at the same time the perception of risk by investors has not changed significantly. The slowdown in the growth of real estate prices is taking place along with the continued growth in the volume of real estate sales in the area of housing construction and the granting of loans to the population for housing purposes by banks. According to available data from the real estate market, which includes only new constructed buildings, in the first half of 2024, the number of apartments sold increased by 6.2%. The growth of apartment sales takes place in parallel with the growth of housing loans, which make up nearly one quarter of total household loans and have increased by 12.3% compared to the first half of 2023 (newly approved housing loans have increased by almost 30% in the same period). Therefore, it is unlikely that investors' perception of risk related to the real estate market will worsen in the coming period, bearing in mind that the real estate market has so far proven to be extremely resistant to economic turbulence, and that it forms a certain type of "safe haven" for investor in BH.

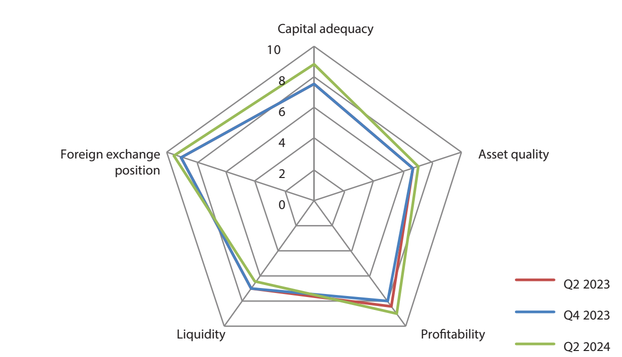
According to the official projections of the CBBH, BH economy expects a moderate level of economic growth in the coming period as well, which will not exceed the multi-year average of 3.0%. The economy will continue to be heavily dependent on developments in the international environment, so the risks to financial stability will predominantly arise from that segment. Consequently, it can be expected that the assessment of risk to financial stability will remain at approximately the same level as in 2024, and a significant improvement would presume stronger economic growth, which is not certain in the current macroeconomic environment.

2 BANKING SECTOR TRENDS AND RISKS

In the first half of 2024, the banking sector of BH maintained a high degree of stability primarily under the influence of strong growth in profitability, with the continuing trend of improved asset quality, high liquidity and good capitalisation. In the course of 2024, a pronounced trend of strengthening the credit activity of banks was recorded. In the coming period, a slowdown in the growth trend of profitability can be expected under the influence of pressure on the growth of financing costs, weaker growth of interest income and potential deterioration of asset quality associated with a weak recovery of economic activity. Good capital positions and high liquidity of the banking sector leave enough space for banks to absorb risks, which was confirmed by the results of stress testing of solvency and liquidity against unlikely and very strong shocks.

The overall assessment of financial health indicators for the first half of 2024 indicates that the resilience of the banking sector has increased both in relation to the end of 2023 and in relation to the same period of the previous year, with improved assessments in the segments of profitability, asset quality, capitalisation and foreign exchange risk, while the rating in the liquidity segment has slightly decreased but still indicates that the banking sector is highly liquid. (Graph 5). In the first half of 2024, the trend of asset quality improvement at the systemic level continued, which is simultaneously the result of a reduction in non-performing loans as well as significant credit growth. Despite the challenging macroeconomic environment, the recovery of nonperforming claims was recorded in a smaller part of the credit portfolio, whereby the average annual default rate in the observed period remained low in the segment of households and legal entities and amounted to 1.13% and 0.94%, respectively.

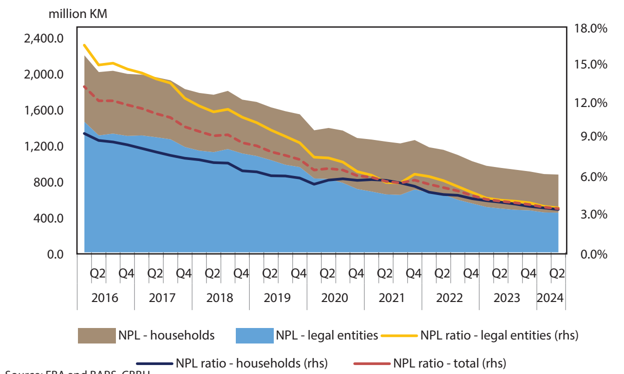
Graph 5: Banking Sector Financial Soundness Indicators Chart



Source: CBBH

The share of non-performing loans in total loans at the end of the first half of 2024 was 3.5%, which is the lowest value of this indicator since 2006, and a decrease in the share of non-performing loans in total loans of 60 basis points compared to the same period of the previous year was recorded both in the household sector and in the sector of non-financial companies. In addition to the already mentioned factors, the continuous reduction of the share of non-performing loans in the total loans of the household sector is also supported by positive developments on the labour market regarding the continued growth of real net wages. A lower perception of credit risk in the household sector is also indicated by the data from the Bank Lending Survey[1], according to which, in the first two quarters of 2024, the easing of standards for approving housing, as well as consumer and general-purpose loans was recorded. Non-financial companies also continue to successfully amortise risks arising from the macroeconomic environment, which indicates that inflationary pressures in the previous period did not negatively affect their ability to service liabilities. However, in the observed period, a slight trend of growth in the share of loans with an increased level of credit risk 2 in the total loans of this sector is noticeable.

Graph 6: Loan Portfolio Quality



Source: FBA and BARS, CBBH

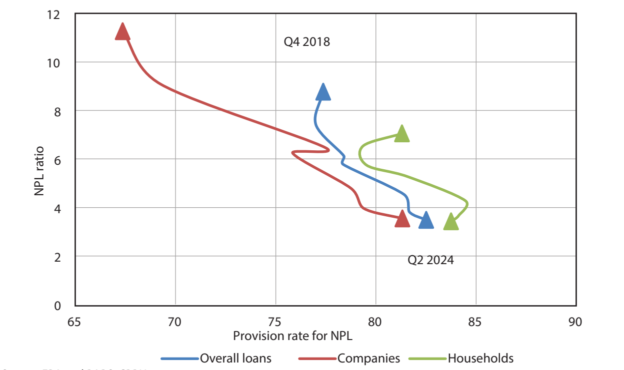
The share of credit risk level 2 loans at the end of the second quarter of 2024 was 11.4% and recorded an increase of 60 basis points compared to the same period of the previous year, to which the construction, transport and storage sector and the agriculture, forestry and fishing sector contribute the most. Such trends indicate a gradual accumulation of risks in certain industries in the corporate sector. Also, according to the results of the last Bank Lending Survey in 2024, credit standards for both short-term and long-term loans to companies were additionally tightened in the second quarter, which is in line with the increased risk perception of banks in the macroeconomic environment.

[1] *Bank Lending Survey in BH (Report for the second quarter of 2024)*

Still uncertain economic developments could affect the results of operations of non-financial companies, resulting in increased credit risk coming from this sector, which could materialise in the coming period.

The low level of non-performing loans in total is accompanied by a high coverage of non-performing loans by provisions for expected credit losses. On Graph 7, it can be seen that the coverage of non-performing loans by provisions for expected credit losses has been continuously increasing in the observed period since the start of the application of the IFRS 9 standard, and this trend continued in the first half of 2024, reaching a level of as much as 82.5%.Such high coverage, along with a low level of non-performing loans, makes banks more stable and resistant to possible market turbulence, providing security in facing future challenges in a dynamic economic environment.

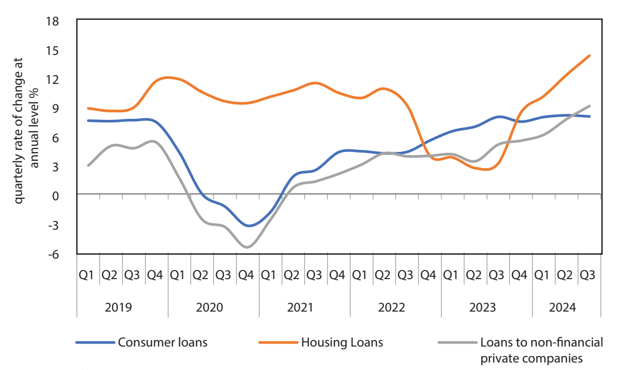
Graph 7: Coverage of Non-performing Loans with Provisions



Source: FBA and BARS, CBBH

In addition to the reduction in the value of non-performing loans, a significant intensification of credit activity in 2024 also contributes to the improvement of the asset quality indicator (Graph 8). The credit activity achieved was positively influenced by the growth in demand for loans and relatively low active interest rates.

Graph 8: Households and NFC Loans Dynamics

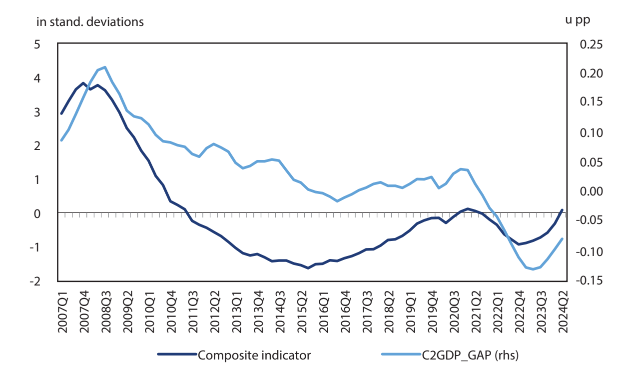


Source: FBA and BARS, CBBH

On an annual basis, credit growth amounted to 7.9% at the end of the first half of 2024, and in the third quarter it further accelerated and reached the level of 9.1%. The corporate and household sectors recorded annual credit growth of 9.1% each at the end of the third quarter of 2024. Credit growth in the household sector was primarily generated by the growth of consumer loans and housing loans, whose annual growth rate in the third quarter of 2024 was 8.0% and 14.3%, respectively.

The strengthening of credit activity in the private non-financial sector resulted in a decrease in the negative gap between the ratio of loans to the private sector and GDP, which in the second quarter of 2024 amounts to -8% and, despite the decrease, still indicates below-average credit activity (Graph 9). On the other hand, the composite indicator in the recent period is already positive and amounts to 0.1 standard deviation, which means that the financial cycle at the end of the second quarter of 2024 is at a level slightly above its long-term trend. If we observe the contributions of each of the variables used in the composite indicator, we conclude that most of the included lending indicators still contribute negatively to the composite indicator of the financial cycle, with the fact that the negative contributions have significantly decreased in the last few quarters. On the other hand, indicators that include net interest income, non-performing loans, indicators from the labour market, indicators from the real estate market, and foreign borrowing, contribute positively to the composite indicator and indicate that the financial cycle is already in an upward phase.

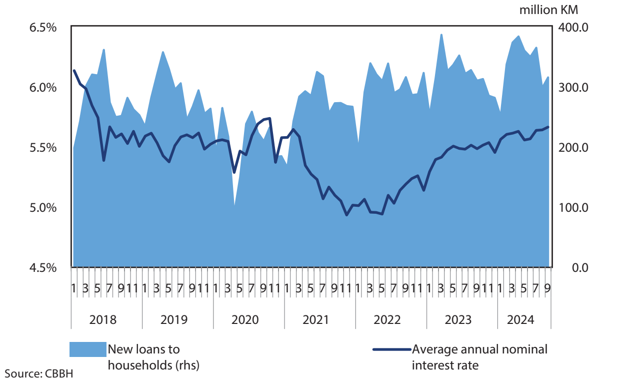
Graph 9: Assessment of Financial Cycle for BH



Source: CBBH

Although the pressures to increase interest rates on the BH banking market have been present since the start of the ECB interest rate increase, from the presentation of interest rate trends in BH, it is evident that the intensity of interest rate growth in BH was limited in the observed period. Interest rates on newly approved loans to companies and households registered a gradual, mild growth during 2023, which continued until the end of the third quarter of 2024. The average weighted interest rate on newly approved corporate loans for the first nine months of 2024 was 4.3% and is by 21 basis points higher than the average interest rate in 2023.When it comes to the household sector, the average weighted interest rate in the first nine months of the current year was 5.6% and is by 14 basis points higher than the average interest rate in 2023.

Graph 10: New Loans to Households and Interest Rates

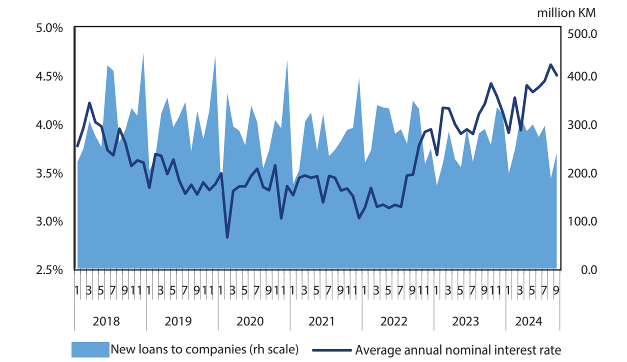


Source: CBBH

So far, banks have been less inclined to significantly increase interest rates (200 bp or more) on existing loans with a variable interest rate. Thus, a significant increase in interest rates was recorded in a small part of the loan portfolio, which at the end of the first half of 2024 accounted for less than 6% of total loans.

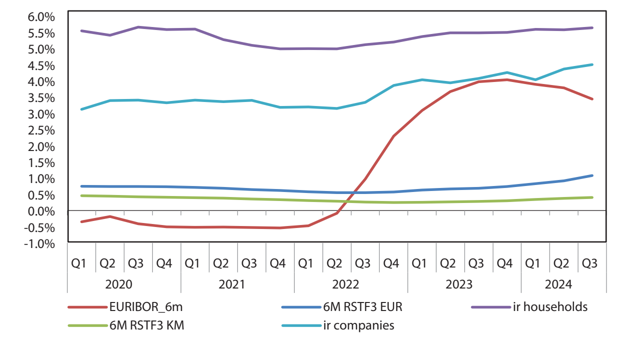
The trends of the reference rates of the average weighted bank funding costs in BH also shows that in the observed period there were no significant changes in the bank funding costs, that is, the reference rates of the average bank funding costs in BH are still at low levels (Graph 12). Funding from sources in local currency is always significantly cheaper than sources in euro, and in the last six quarters a somewhat more dynamic increase in the six-month reference rate for sources in EUR currency compared to sources in KM currency can be observed. Compared to the end of 2023, at the end of the third quarter of 2024, the six-month reference rate for sources in EUR currency recorded an increase of 34 basis points, while the increase in the reference rate for sources in KM in the observed period amounts to 10 basis points. The more dynamic increase in the six-month reference rate for sources in EUR in the observed period was partially reflected in financing with special purpose instruments used by banks for the purpose of fulfilling the Minimal regulatory equity level (MREL)[2].

Graph 11: New Loans to Companies and Interest Rates



Source: CBBH

Graph 12: Trends of EURIBOR and Interest Rates in BH



Source: FBA and BARS, CBBH

Note: 6M RSTF3 EUR and 6M RSTF3 KM represent benchmark rates for all sources of six-month financing in BH banking sector, including those from households NFC and financial institutions.

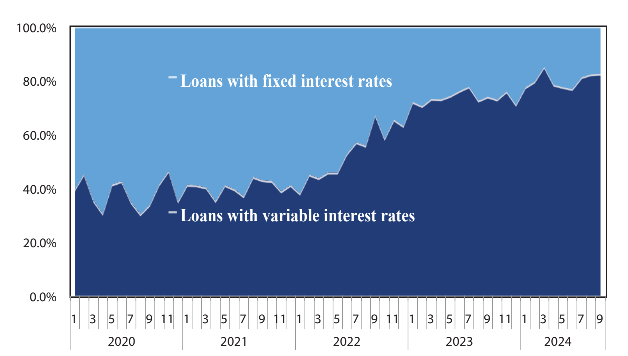
Deposit interest rates on new deposits of households and non-financial companies also continued to record slight growth in 2024. The average weighted interest rate on newly contracted household deposits in the first nine months of the current year was 2.1% and is by 28 basis points higher than the average rate in 2023. Looking at newly contracted deposits by currency, we conclude that the average weighted interest rate on retail deposits in KM (1.76%) is lower than the average weighted interest rate on deposits in EUR and with a currency clause in EUR (2.25%), and both rates recorded almost equal growth in the first nine months of 2024. In the sector of non-financial companies, the average weighted rate on newly contracted deposits in the observed period was 1.92% and recorded a slightly more significant growth of 71 basis points compared to the average rate in 2023. The significant growth of this rate was influenced by the average weighted interest rate on deposits in EUR and with a currency clause in EUR, which in the observed period recorded an increase of 80 basis points and amounted to 2.3%, while the average weighted interest rate on deposits in KM in the same period recorded an increase of 40 basis points and amounted to 1.5%.

Banks continued to avoid interest-induced credit risk, granting more and more loans at a fixed interest rate. The growth trend in the share of loans with a fixed interest rate accelerated during 2024, so that in the first nine months of the current year, as much as 80% of total newly approved loans were those with a fixed interest rate. According to data from the FBA and BARS, the share of loans with a fixed interest rate in the total loan portfolio at the end of the second quarter of 2024 amounted to 83.4% and 78.0%, respectively. Although the trend of growth in the share of loans with a fixed interest rate made a positive contribution to the reduction of interest-induced credit risk, the over-emphasized participation of loans with a fixed interest rate, together with the growth of bank funding costs and the growing gap in the maturities of assets and liabilities, could have a negative impact on the profitability of banks. Nevertheless, taking into account the data of banking agencies on effective interest rates, which are noticeably higher than nominal

[2] *Decision on minimum requirement for own funds and eligible liabilities ("Official Gazette of the Federation of BH", No. 26/18) and Decision on minimum requirement for own funds and eligible liabilities ("Official Gazette of Republika Srpska", No. 19/23*

interest rates, especially in the household sector, it can be concluded that banks have already to some extent incorporated estimates of the growth of funding costs into the effective interest rate on loans with a fixed interest rate.

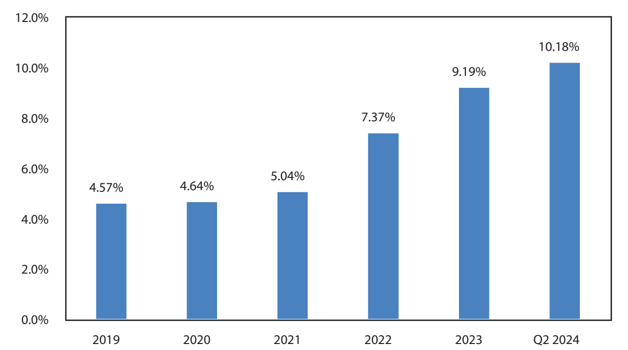
Graph 13: New Loans Structure by Interest Rate Type



Source: CBBH

The recorded increase in the share of assets with a fixed interest rate, as well as the increasing differences in the maturity of assets and liabilities in the banking sector, also influenced the increased exposure to interest rate risk in the banking book in several previous years, and the same trend continued in the first half of 2024. In accordance with regulatory regulations, in order to assess the exposure to market risk in the event of an increase in interest rates, banks apply the scenario of a parallel increase in interest rates by 200 basis points to positions in the banking book that are sensitive to changes in interest rates. The application of the above scenario at the end of the second quarter of 2024 would lead to a decrease in the total economic value of banking book positions and regulatory equity by 10.2%. Although this growth signals an increased risk, it is still below the supervisory threshold of 20%, which means that the sector remains relatively resilient in facing the potential economic challenges that follow the rise in interest rates. However, significant differences are noticeable for individual banks in the system, therefore changes in the economic value of capital in the second quarter of 2024 reach a rate of over 17% for some banks.

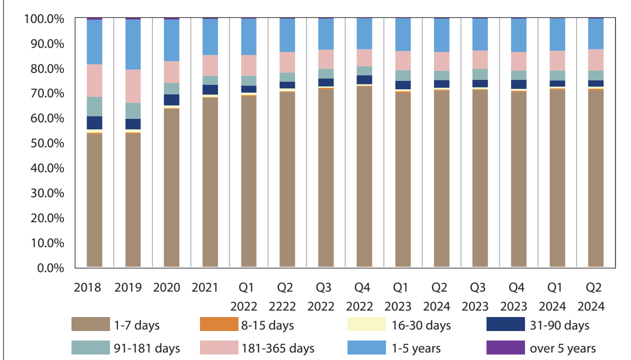
Graph 14: Rate of Change of Economic Value of Positions of Banking Book and Regulatory Capital



Source: FBA and BARS, CBBH

The structure of banks' sources of funding is based to the greatest extent on deposits of domestic resident sectors, which make up 98% of the total deposits of the banking sector and which amounted to KM 31.9 billion at the end of the second quarter of 2024. The continuous growth of private non-financial sector deposits confirmed their role as the primary source of funding for banks. The total deposits of all sectors registered an annual growth of 7.3%, which is largely contributed by the growth of deposits of non-financial private companies at a rate of 14.5%, and the growth of household deposits at a rate of 9.1%. On the other hand, in the observed period, a significant decrease in bank and government sector deposits was recorded. The maturity structure of deposits is still unfavourable, and over time could become a limiting factor for long-term lending. The share of deposits with a maturity of 1 to 7 days is 70.8% of total deposits. On the other hand, the share of long-term deposits with a remaining maturity of more than 5 years at the end of the second quarter of 2024 is 0.3% of total deposits (Graph 15).

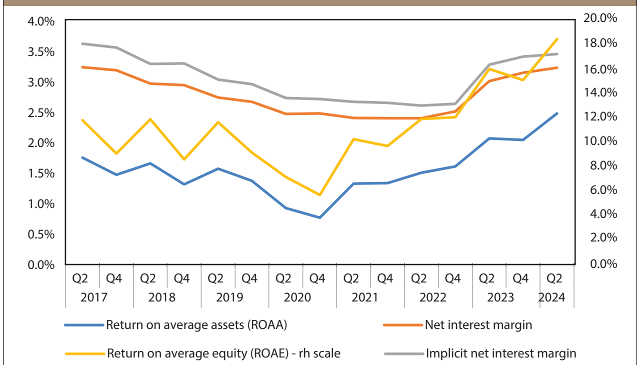
Graph 15: The Total Deposit Structure by the Remaining Maturity



Source: FBA and BARS, CBBH

In the first half of 2024, the BH banking sector showed a significant increase in net profit and achieved a higher return on average assets and average capital compared to the same period of the previous year. The net profit of the banking sector in the first half of 2024 amounted to KM 362 million and is by 27.8% higher than in the same period of the previous year (Graph 16).

Graph 16: Profitability Indicators



Source: FBA and BARS, CBBH

The increase in net profit was achieved for the most part owing to a strong increase in net interest income, due to the continued growth of credit activity and the increase in interest rates on loans to companies. Although the trend of profitability growth continued in the first half of 2024, there is a noticeable slowdown in the growth dynamics of realised net profit compared to the previous year, under the influence of a weaker intensity of growth in net interest income with a simultaneous increase in non-interest expenses based on the increase in employee wage costs and other operating costs.

The dynamics of the net interest margin also slowed down in the first half of 2024 (Graph 16).The level and sustainability of the current level of profitability will depend on several factors, such as the intensity of growth in interest rates on term deposits and other sources of funding, and the potential deterioration of asset quality in conditions of intensified uncertainty in the macroeconomic environment.

Table 1 provides an overview of the basic indicators of the BH banking sector.

Table 1: The selected indicators from BH banking sector

	2018	2019	2020	2021	2022	2023	Q2 2024
The total assets (mil KM)	30,282.0	32,969.3	33,471.5	35,905.1	37,429.4	39,569.6	40,587.5
The total assets (% GDP)	89.3	92.1	96.1	91.7	81.0	82.1	81.5
The total capital (mil KM)	3,936.6	4,174.8	4,120.4	4,224.7	4.453.4	4,883.9	5,196.9
Capital adequacy (%)	17.5	18.0	19.2	19.6	19.6	19.7	19.6
The total loans (mil KM)	19,331.5	20,684.1	20,748.5	21,596.0	21,923.0	23,532.6	24,790.8
Non-performing loans (%)	8.8	7.4	6.1	5.8	4.5	3.8	3.5
The total deposits (mil KM)	23,654.5	25,820.1	26,176.1	28,683.5	30,038.7	31,639.8	32,572.2
Loan to deposit ratio (%)	81.7	80.1	79.3	75.3	73.0	74.4	76.1
Net profit (mil KM)	330.4	370.5	227.1	409.0	500.7	705.8	463.0
Number of banks	23	23	23	22	22	21	21

Source: CBBH

2.1. BASIC FINDINGS OF SOLVENCY STRESS TEST OF BANKING SECTOR FOR Q2 2024

Stress testing based on data from the end of the second quarter of 2024 confirmed that the banking sector, with the existing level of capitalisation, is capable of absorbing the assumed shocks of even a stronger adverse scenario, as a result of which even during the testing time horizon until the end of 2026 capitalisation at the sector level it remained significantly above the regulatory minimum of 12% as well as the capital preservation buffer at the prescribed level of 14.5%. Additional capital requirements from Pillar 2, which were determined for each individual bank within the framework of the Supervisory Review and Evaluation Process (SREP) of individual banks are also included in the stress testing.

The conducted stress test has a three-year horizon (years 2024-2026), and the level of solvency is considered through three different scenarios of economic developments, namely the baseline and two adverse scenarios. The baseline scenario is based on the expected economic trends according to the official projections of the CBBH from May 2024, while the adverse scenarios are modelled in a way that a wide range of exogenous and endogenous variables are incorporated into the model in the form of hypothetical economic shocks, which ultimately reflects on the main macroeconomic assumptions.

a contraction of economic activity only in the second year of testing, while in adverse scenario 2, whose goal is to determine the smallest weaknesses in the banking sector, a recession is predicted during the first two years of testing. Furthermore, personal consumption is under the influence of inflationary pressures until the end of the projection horizon, which especially deepens the recession in adverse scenario 2 during 2025. The assumed increase in the country risk premium is the same in both adverse scenarios and leads to a significant increase in domestic interest rates on loans to households and companies in 2025. The growth of interest rates will also affect the slowdown of credit activity, especially in the corporate sector, and both adverse scenarios assume modest credit growth rates until the end of the testing time horizon. Consequently, in the second year of testing, a significant decrease in real estate prices is expected in both scenarios. An overview of the main macroeconomic indicators in the baseline and adverse scenarios is presented in Table 2.

Table 2. Basic assumptions in stress tests

	Baseline scenario			Adverse scenario 1			Adverse scenario 2		
	2024	2025	2026	2024	2025	2026	2024	2025	2026
Real GDP growth	2.6%	2.9%	3.3%	0.4%	-0.9%	0.9%	-0.2%	-3.8%	0.5%
Inflation	2.6%	2.0%	1.7%	3.1%	4.3%	3.4%	3.2%	5.0%	3.8%
Credit growth - companies	4.6%	3.9%	3.2%	2.2%	1.4%	4.1%	1.4%	1.2%	4.2%
Credit growth - households	6.4%	4.9%	3.9%	5.7%	2.1%	2.2%	5.6%	1.7%	1.8%
Lending interest rates - companies	4.4%	4.5%	4.7%	4.7%	5.8%	6.8%	4.7%	5.9%	6.9%
Lending interest rates - households	5.7%	6.0%	6.3%	6.0%	7.1%	8.2%	6.0%	7.2%	8.4%
Growth of residential real estate prices	6.7%	2.7%	4.6%	4.5%	-9.2%	7.7%	4.5%	-8.4%	8.1%

Source: CBBH

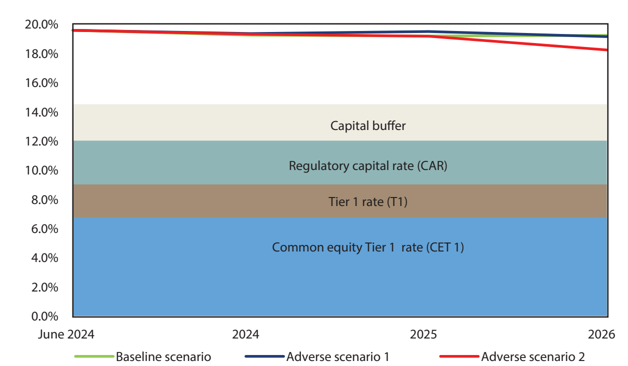
In the baseline scenario, the continuation of positive macroeconomic trends is expected, primarily in terms of economic growth and inflation.

The key risks to economic activity in BH, which were shaped by **two adverse scenarios**, stem from geopolitical instability in Ukraine and the Middle East, and their implications for the economy of Europe and BH as well. Additional risk to BH economy results from potential adverse events caused by climate change. The main difference between the two hypothetical scenarios is reflected in the intensity of the assumed recession, where the milder adverse scenario assumes

The capital adequacy rate of the banking sector at the end of the first half of 2024 as a starting point in stress testing was 19.6%, with all banks in the system recording very high capitalisation. In the baseline scenario, the banking sector maintains a high level of capitalisation of 19.2% until the end of the time horizon of the stress test. All banks would be able to maintain the level of capital significantly above the regulatory minimum of 12%, as well as fulfil the additional capital requirements from Pillar 2 established within the framework of the individual bank supervisory review and evaluation process (SREP), and there would be no need for capital increase in any bank in the sector during of the testing time horizon

(Graph 17). Also, all banks in the system would manage to maintain an additional capital preservation buffer[3]. In an adverse scenario, the capital adequacy ratio at the end of the test period would be a high 19.1%. The results of the stress test show that the banking sector is extremely resistant to assumed shocks in the said scenario, and that only one smaller bank in the system with a share of 0.8% in total assets would, in the event of a milder adverse scenario materialising, express the need for capital increase and this is only in the third year of the projected stressful period.

Graph 17: Capital Adequacy Ratios in Baseline and Two Adverse Scenarios and Minimum Regulatory Capital Requirements

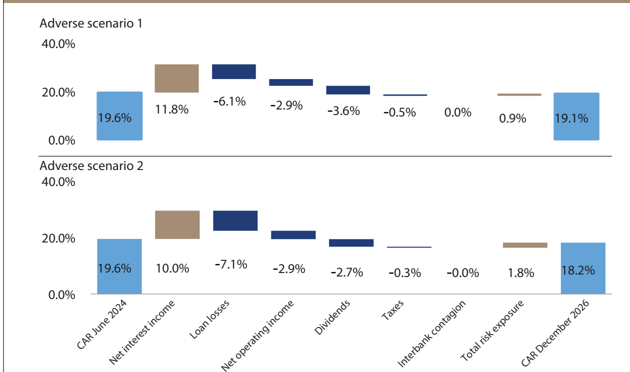


Source: CBBH

In addition to the aforementioned bank, two other smaller banks in the system would exhaust their surplus capital when absorbing the assumed shocks of adverse scenario 1, encroaching on the capital preservation buffer. If the shocks from adverse scenario 2 materialise, the capital adequacy rate at the system level would decrease to 18.2%, and additional capital needs at the end of the three-year test period would be reported by a total of four banks in the system with a participation of 6.35% in total assets, whereby three banks would not meet the minimal regulatory equity level requirement at the system level of 12%, while one bank would not be able to meet the additional equity requirements from Pillar 2 at the end of the third year testing. Total capital increase needs at the banking sector level by the end of the third year of testing would amount to KM 24.8 million, which is only 0.05% of the gross domestic product in 2023. In addition to the aforementioned banks that have expressed a need for capital increase, two more banks would exhaust their accumulated capital surpluses in this unfavourable macroeconomic scenario, i.e. their capital preservation buffer would be undermined.

Graph 18 shows the contribution of individual positions of the balance sheet and income to the change in the capital adequacy rate at the systemic level, cumulatively, in adverse scenarios, in the period from the end of the second quarter of 2024 to the end of 2026. The decline in the capitalisation of the banking sector in both stress scenarios is primarily the result of increased losses based on credit risk. The total NPL ratio at the level of the system in the event of materialisation of the assumed shocks could increase by 2.3% at the end of 2026 in a milder adverse scenario, or by 2.8% in a stronger adverse scenario.

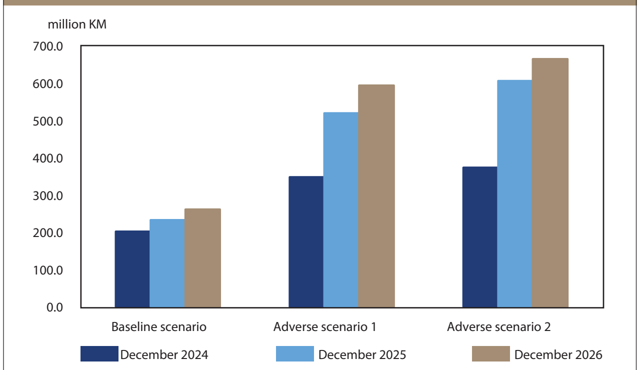
Graph 18: Contributions of Individual Items to Capital Adequacy Ratio, in Adverse Scenarios



Source: CBBH

Losses based on credit risk arise precisely from provisions for financial asset items (Graph 19), primarily the credit portfolio of the corporate and household sectors, and make the most significant negative contribution to the capital adequacy rate in conditions of stress. The capital adequacy rate is also significantly influenced by cumulative changes in net interest income and net operating income. It is net interest income that makes the biggest positive contribution to the capital adequacy rate of 11.8% in adverse scenario 1 and 10% in adverse scenario 2. Given that the stress test also assumed the payment of dividends in all three periods of stress testing and in all three scenarios, banks that make a profit pay dividends, which gives a negative contribution to the final capital adequacy ratio in the banking sector. The impact of interbank contagion in the system on the capitalisation of banks, which was quantified in both adverse scenarios, is negligible for now (Graph 18).

Graph 19: Provisions for Credit Risk



Source: CBBH

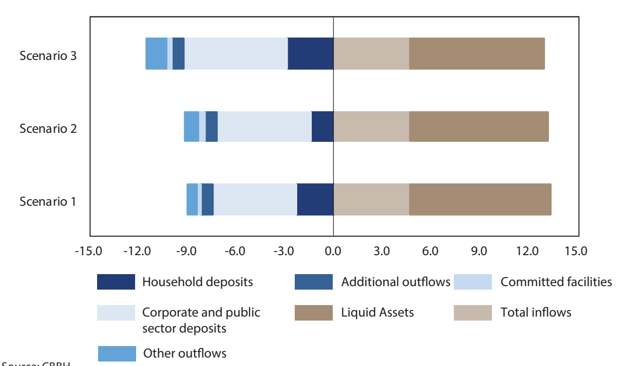
[3] *According to the current Decisions on the calculation of capital, banks are obliged to maintain a capital preservation buffer in the form of common equity Tier 1 in the amount of 2.5% of the total amount of risk exposure. The capital buffer is added to the common equity Tier 1 rate of 6.75% and cannot be used to maintain the common equity Tier 1 and total capital rates. Maintaining the prescribed capital preservation buffer is a condition for the payment of dividends for banks.*

2.2. BASIC FINDINGS OF LIQUIDITY STRESS TEST OF BANKING SECTOR FOR Q2 2024

Based on the results of the liquidity stress test conducted on the basis of data for the end of the first half of 2024, we can conclude that the banking sector in BH is resistant to liquidity shocks and shocks on the side of funding sources assumed in alternative scenarios. Such findings are primarily the result of the banks' good initial liquidity position and the high value of the LCR coefficient at the end of the first half of 2024 at the sector level, well above the regulatory minimum.

The CBBH conducts a top-down macro liquidity stress test on a quarterly basis, based on the approach of the standardised measure of the liquidity coverage ratio (LCR).

Graph 20: Basic LCR Components, Q2 2024



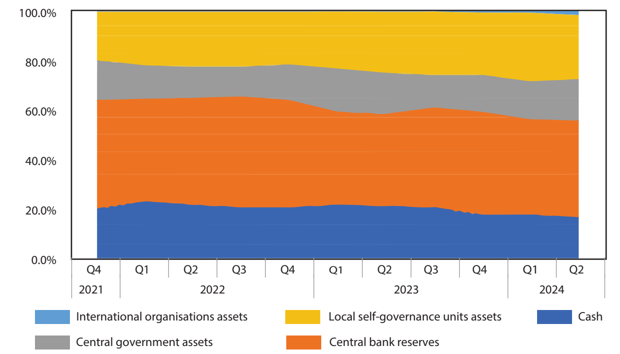
Source: CBBH

The shocks in the liquidity stress test exceed the LCR parameters in terms of intensity and were calibrated using the expert assessment of the CBBH in the form of three alternative stress scenarios. Graph 20 shows the change in the basic LCR components through three assumed scenarios, where it is noticeable that the change in the liquidity position is affected by the increase in liquidity outflows, given the assumption that inflows will remain at the same level during the observed shock period of 30 days. The first stress scenario assumes a shock on the part of the household sector (deposit run) and is mostly reflected in an increase in the outflow of household deposits. The second stress scenario represents a hypothetical systemic liquidity crisis in the country, in which a greater intensity of stress on the sources of funding for banks would come from the corporate sector, i.e. there would be a significant outflow of company deposits. The third, combined stress scenario is an adverse scenario that assumes a combination of shocks from the previous two scenarios, with elements of idiosyncratic shocks (large withdrawals of deposits, larger than expected withdrawals of approved credit lines) and stress on the financial market (a large decline in the value of all securities held as liquid assets).

The assumed shocks in this scenario are about two to three times stronger than the requirements according to the LCR regulation, with the aim of identifying even the smallest weaknesses in banks' liquidity positions.

With regard to the structure of the most significant sources of liquid assets available to cover the net liquidity outflows of the banking sector, significant changes can be seen since the beginning of liquidity stress tests. Graph 21 shows a decrease in the share of cash from the second quarter of 2023 from 20.6% to 16.6% at the end of the second quarter of 2024. On the other hand, in the same time interval, a proportionally slight increase in the share of funds invested in local government assets and assets of international institutions is noticeable. Funds in the Central Bank reserve account remain the most significant source of the liquidity buffer, with a share of 38.8%.

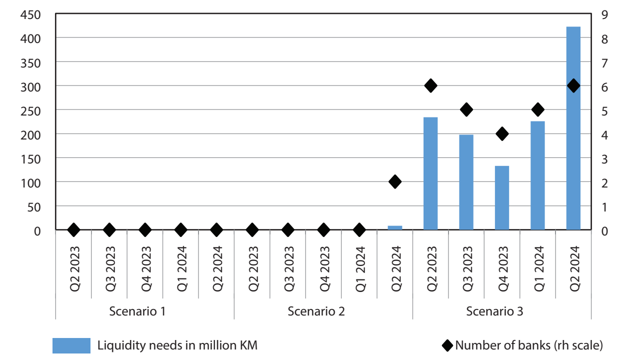
Graph 21 : Liquidity Buffer Structure



Source: FBA and BARS, CBBH

The results of the conducted stress testing point to a high degree of banks' resistance to liquidity and financing disturbances. In the first stress scenario, which assumes a significant outflow of household deposits, all banks in the system are able to successfully cover the assumed outflows and keep the LCR coefficient above the regulatory minimum. In Scenario 2, two banks report the need for additional liquid funds due to the materialisation of shocks that are more pronounced on the side of the corporate sector, which indicates that they mostly rely on less stable sources of deposits from the corporate sector (Graph 22). According to the strongest stress scenario, six banks from the system would not absorb liquidity stress in a period of 30 days without additional liquid assets. Bearing in mind that the combined scenario is an extremely strong adverse scenario, it can be considered that the banking sector has, to the greatest extent, well absorbed the shocks assumed in this scenario.

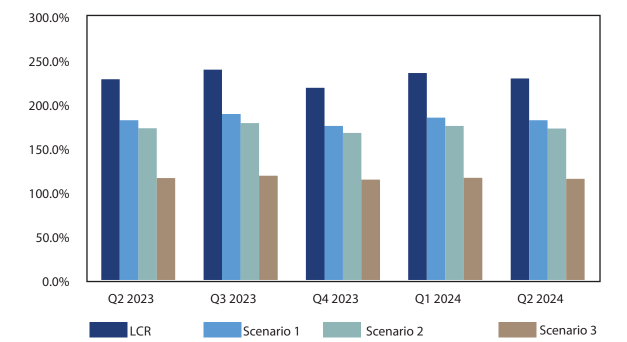
Graph 22: Overall Banks' Needs for Additional Liquid Assets



Source: CBBH

Although individual banks proved to be sensitive to assumed liquidity shocks, especially in the strongest stress scenario, the aggregated stress test results show that the LCR for the banking sector in each of the conducted quarterly stress tests remained considerably above the regulatory minimum (Graph 23). The continuous resistance of the entire system to assumed shocks even in the most severe scenario is not surprising given the strong liquidity position and high ratings of liquidity indicators in BH banking sector.

Graph 23: Liquidity Coverage Ratio (LCR) for Banking Sector



Source: CBBH
Note: In all three alternative liquidity stress test scenarios, the amount of expected inflows that can offset expected outflows is limited to 75% of outflows.

3. REGULATORY FRAMEWORK

In 2024, the banking agencies strengthened the regulatory framework by adopting new by-laws and a set of temporary measures in order to preserve the stability of the banking sector. At the end of 2023, entity banking agencies in BH passed decisions related to the determination of additional capital requirements and measures to limit structural systemic risks[4], and decisions related to the determination of minimum requirements for managing interest rate risk in the banking book[5]. The first of the aforementioned decisions apply from 30 June 2024, and were adopted with the aim of preserving and strengthening the stability of the banking system, reducing excessive or underestimated exposure, timely management of credit risk, increasing the resilience of banks, and ultimately limiting systemic risks in the financial system. Every bank is obliged to maintain a capital preservation buffer for structural systemic risk (Systemic Risk Buffer - SyRB) in the form of common equity Tier 1, if it meets one or both of the following conditions: the share of non-performing loans in total loans is greater than 5% and/or the rate of expected credit losses for non-performing loans (ECL rate for NPLs) is less than 65%, and the SyRB rate can be 0%, 1% or 2% of the total amount of the bank risk exposure. The agencies will review the established thresholds and indicators for determining the SyRB at least once a year, and if deemed necessary, prescribe additional indicators to prevent or reduce structural systemic risks, as well as a higher SyRB rate that can amount to a maximum of 3%. Also, changes have been made to the regulatory regulations regarding the calculation of capital requirements for general-purpose and replacement loans to individuals. Banks are thus obliged to apply higher risk weights when calculating capital requirements for general-purpose and replacement loans to individuals, whose remaining maturity is longer than 5 years and for exposures or part of the exposure fully secured by residential real estate in which the owner resides or will reside, or which s/he rents or will rent, if the remaining maturity is longer than 20 years[6].

With a focus on a reliable and efficient Interest Rate Risk management system in the Banking Book (IRRBB), with new decisions that will apply from 30 June 2025, the banking agencies introduce minimum standards for the establishment of an interest rate risk management system in the banking book, measuring risk using a standardised approach and a supervisory test of atypical values, and the establishment of internal capital requirements for interest rate risk in the banking book and internal controls for managing interest rate risk.

In response to the recent natural disaster that struck certain municipalities in FBH, FBA made temporary decisions with the aim of mitigating the negative economic consequences and preserving the banking stability, as well as the microcredit and leasing sector in FBH, by granting relief to the bank's clients who are directly or indirectly affected by negative consequences of extraordinary circumstances, and special rules for credit risk management, which the bank applies in case it approves special measures for the client[7].

In September 2024, the Republika Srpska Banking Agency (BARS) adopted a set of temporary measures aimed at preserving the banking sector stability. Thus, decisions were made on temporary measures for granting relief to individuals and legal entities for the settlement of credit obligations[8], with the aim of mitigating the negative economic consequences caused by the difficult business conditions of companies affected by a difficult economic situation and whose operations are limited. The Decision on the temporary measure of preservation of bank capital[9] was adopted, with the aim of strengthening the capital base of banks in conditions of economic instability and increasing the resistance of banks to financial shocks, which introduces the obligation to submit a request by the bank and give consent from the BARS for the payment of profits generated in the previous business year.

[4] *Decision on establishing additional capital requirements and measures to limit systemic risks ("Official Gazette of the Federation of BH", No. 98/23 of 15/12/2023.*
Decision on the capital preservation buffer for systemic risk, ("Official Gazette of Republika Srpska", No. 06/24 of 26/12/2024 and Decision on the rate and method of maintaining the capital preservation buffer for structural systemic risk ("Official Gazette of Republika Srpska", No. 45/24 of 21 May 2024.

[5] *Decision on interest rate risk management in the banking book ("Official Gazette of Republika Srpska", No. 06/24 of 26/12/2023 and Decision on interest rate risk management in the banking book ("Official Gazette of the Federation of BH", No. 98/23 of 15/12/2023.*

[6] *Decision on amendment to the Decision on inclusion of special conditions for contracting long-term general-purpose and replacement loans to individuals in the risk management system in the bank ("Official Gazette of Republika Srpska", No. 06/24 of 26/12/2023 and Decision on determining additional capital requirements and measures to limit systemic risks ("Official Gazette of the Federation of BH", No. 98/23 of 15/12/2023.*

[7] *Decision on special measures applied by the bank in extraordinary circumstances - floods from October 2024 ("Official Gazette of the Federation of BH", No. 79/24 of 8 October 2024 and Decision on special measures applied by the leasing company and microcredit organisation in extraordinary circumstances - floods from October 2024 ("Official Gazette of the Federation of BH", No. 79/24 of 8 October 2024.*

[8] *Decision on temporary measures for granting relief to natural persons for the settlement of credit obligations („Official Gazette of Republika Srpska", No. 84/24 of25September 2024 and Decision on temporary measures for granting relief to legal entities for the settlement of credit obligations ("Official Gazette of Republika Srpska", No. 95/24 of 29 October 2024.*

[9] *Decision adopted on 25/09/2024, "Official Gazette of Republika Srpska" No. 84/24*

The third temporary measure refers to the adoption of the Decision on Amendments to the Decision on Temporary Measures to Limit Exposure[10], the aim of which is to mitigate risks arising from exposure to foreign central governments and central banks due to disruptions in global financial markets. Through monitoring the implementation and effects of the aforementioned decision, the BARS recognised the need for additional restrictions on banks' investments in global financial markets, so that in the event of potential risks, banks would continue to finance the growth of domestic economic activity unhindered and continuously.

In October 2024, BARS adopted a set of by-laws regulating the work and enabling the licensing of electronic money issuing companies, in accordance with the Law on Electronic Money of RS. These by-laws additionally regulate the domestic market and introduce modern financial services from the international market by defining and prescribing general criteria in the process of issuing a licence for issuing electronic money, operations and regulatory requirements that must be met by a company for issuing electronic money in order to ensure stable and safe operations, supervision over the performance of electronic money issuing operations, and specified obligations of regular reporting and extraordinary notifications about the operations of the subjects of supervision.

In September 2024, the CBBH Governing Board adopted a Decision on Amendments to the Decision on Determining the Tariff of Fees for Services Provided by the CBBH. The Decision is aimed at speeding up transactions with greater transparency and efficiency of payment transactions, standardising the costs of payment transactions, enabling easier cost management and simplified calculation of fees for payment transactions, implying improved quality of services offered by commercial banks to their clients. By introducing a single fee for performing payment transactions in the Giro Clearing system and real-time gross settlement (RTGS), which is also lower than the current average value of fees, commercial banks in BH are enabled to act uniformly regardless of the time interval of settlement of interbank transactions. With the aim of stimulating the CBBH depositors to use electronic banking, the aforementioned Decision also changes the tariff of fees for transactions with depositors in the part that refers to the use of electronic banking. The Decision applies from 1 November 2024.

[10] *Decision adopted on 25/09/2024, "Official Gazette of Republika Srpska" No. 84/24*

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